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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,269	11/28/2000	Simon Kasif	0918.2033-000 (P00-3373)	7893

7590 05/06/2005

IP Administration  
Legal Department, M/S 35  
Hewlett-Packard Company  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

ZEMAN, MARY K

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/724,269

Applicant(s)

KASIF ET AL.

Examiner

Mary K. Zeman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3,7-9,11,16,22-25,27-30,34 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,7-9,11,16,22-25,27-30,34 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

The indicated allowability of claims 34, 37 and dependent claims thereon are is withdrawn in view of the newly discovered reference(s) to Lobanov et al. Rejections based on the newly cited reference(s) follow.

Claims 2, 3, 7, 8, 9, 11, 16, 22-25, 27-30, 34 and 37 are pending in this application.

Applicant's arguments with respect to claims 2, 3, 7-9, 11, 16, 22-25, 27-30, 34 and 37 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2, 3, 7-9, 11, 16, 22-25, 27-30, 34 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Lobanov et al. (US 6,834,239).

The claims, as amended, are drawn to methods of classifying genome sequences through the use of feature vectors which represent fragments of genome sequences. Claim 34 is the independent method claim, setting forth providing training fragments, training sequences, and training vectors which lead to the creation of differing classes. These training sets and classes are used to classify a subject sequence. Claim 37 is the independent apparatus claim.

Lobanov et al. (US 6,834,239 ; having priority to at least 9/28/00) discloses methods of classification of products (proteins). Each building block (fragment; amino acid) of the product (protein) is assigned a feature vector, which is used as a training subset for determining classes which relate to the features. Predicted or computer values based on probability of existence can be used in the methods. The values can be “determined, estimated or predicted.” The values can be retrieved from an information storage device such as a database. The building block set is identified which refers to at least one reagent or fragment which comprises the target product. A

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supervised machine learning approach is used for the training and classification. After the initial training is complete, the method can be used on target or subject sequences for their classification. The methods of Lobanov can be used on multiple types of products, including polypeptides. Lobanov et al disclose programmed computer systems for performing the methods which meet the limitations of the apparatus claims.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2, 3, 7-9, 11, 16, 22-25, 27-30, 34 and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Claim 34 (added by amendment 8/23/04) and new claim 37 describe methods and apparatus not specifically disclosed in the specification as filed, and are therefore new matter. The specific method set forth by claim 34 is not concretely described in the originally filed specification. The examples in the specification do not set forth a method having each step (a)-(i) nor is it clear from the specification that this particular method was originally disclosed or envisioned. The method disclosed at page 8-9 of the specification is limited to utilization of particularly identified protein motifs and their vectors. The claims are not so limited. This method is not specifically disclosed in the figures. The addition of the limitations of amended claim 3 do not appear to have basis in the specification with respect to the method of claim 34. The limitations of amended claim 8 do not appear to have basis in the originally filed specification. Claims 22-25 are newly dependent from claim 34 and the originally filed specification does not disclose such a method. The apparatus of new claim 37 appears to lack specific disclosure in the original specification. Claims 11, 16 and 27-30 are newly dependent

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on this claim and therefore may lack basis. Neither the figures nor the originally filed specification provide basis for the specific apparatus being claimed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, 7-9, 11, 16, 22-25, 27-30, 34 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 34, the final step should be labeled "(i)" (or some other letter that comes after "h" and not "(e)" as there is already one step "(e)").

It is unclear how the limitations of claim 3 are to be implemented in the method of claim 34. Claim 34 is directed to classifying a single genome sequence, and the change of 2, non-consecutive steps to pluralize the sequences is confusing.

Claim 8 refers to a step "(i)" in claim 34, however, it is unclear if this is to be a subset of step (g) or amend what should be step (i) in claim 34.

The limitations of claims 11, 16, 27 and 29 are to non-functional descriptive material stored in the data store device, and do not further limit the structure of the apparatus itself.

The apparatus of claim 37 lacks means for outputting the results. The apparatus comprises an input means, a data store, and software for performing certain manipulations.

### ***Conclusion***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723

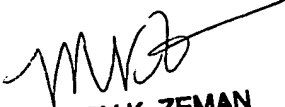
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, PhD can be reached on (571) 272 0718. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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MARY K. ZEMAN  
PRIMARY EXAMINER  
